

# MP2

## Integrated AV Control System

Crestron® MediaManager is a comprehensive family of affordable products fusing high-performance AV signal distribution, device control, and facility-wide system management. MediaManager simplifies the art of ProAV system design and installation with complete hardware, software, and low-cost wiring solutions.

The MP2 combines a control system and audio/video switcher in a single box to provide a cost-effective total room control solution. Easily configured with Crestron SystemBuilder™ software, the MP2 is all that is needed to select and control all of the room's AV and environmental resources including VCRs, DVD/CD players, projectors, screens, lighting and more. The MP2 is ideal as the master control processor for a small stand-alone AV system, and serves equally well slaved to another 2-Series control processor to add audio/video switching and control port expansion.

### 4x2 Video Switcher

The high-bandwidth 4x2 video crosspoint switcher distributes video from four composite sources to two destinations—great for displaying one source on a plasma display while previewing another on a Crestron touchpanel. Alternatively, the switcher may be configured as a 2X1 S-Video switcher. Built-in video-sensing on each input can be used to provide device power status information to the control system, and to detect signal presence for auto-switching.

The video routing capabilities of the MP2 can be extended by adding the C2N-MMS S-Video/RGBHV matrix switcher.

### 7x1 Audio Switcher/Processor

The 7x1 audio switcher provides balanced and unbalanced inputs for seven stereo audio sources. Built-in volume, bass, treble and mute controls and a 6-band graphic/parametric equalizer allow for precise adjustment and complete control of the audio signal. All audio settings and presets may be recalled and controlled from a Crestron touchpanel, keypad or other user interface. Crestron Digital Media Tools software (DMT) provides the installer with a simple utility for setting input levels and equalization settings.

### 2-Series Engine

At the heart of the MP2 is the powerful 2-Series engine. Our exclusive enhanced real-time operating system makes the MP2 the fastest, most reliable control system available. The MP2 features two built-in COM ports, four IR/Serial ports, four I/O Versiports, and four isolated relays, and supports the full range of Crestron touchpanels, keypads, and Cresnet peripherals.

### Cresnet®

Cresnet is the communications backbone for many Crestron touchpanels, keypads, lighting controls, and other devices. The Cresnet bus is a simple, yet flexible 4-wire network that provides rock-solid bidirectional communication for numerous Cresnet devices.

### Cresnet Slave Mode

Selectable Cresnet Slave Mode enables the MP2 to be configured as a Cresnet slave device, effectively transforming it into a Cresnet expansion module. Such flexibility can offer a cost-effective solution for system expansion, providing a host of additional control ports in a single module.

### IR Wireless Option

When equipped with an optional CNXRMIRD IR receiver, the MP2 provides



a low-cost wireless control solution using any Crestron IR wireless touchpanel, or a third-party universal IR remote.

- > 2-Series engine
- > Integrated AV Switcher/Processor
- > Cresnet port - master/slave selectable
- > 2 Com ports (RS-232/422/485)
- > 4 IR/serial ports
- > 4 Versiport I/O ports
- > 4 Low-voltage relay ports
- > IR wireless compatible using CNXRMIRD
- > Complete setup in minutes using MP2 Wizard Software
- > External power pack included
- > Single-space EIA rack-mountable

## SPECIFICATIONS

### Memory

SDRAM: 32 MB

NVRAM: 256 KB

Flash: 4 MB

### Operating System

Real-time, preemptive, multitasking kernel, multi-threaded; FAT32 file system with long names; supports SIMPL Windows™ and SIMPL+®

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## Video

**Switcher:** 4x2 composite matrix switcher or 2x1 Y/C (S-Video) switcher

**Bandwidth:** 100MHz minimum

**Crosstalk:** -60dB

## Audio

**Features:** 7x1 stereo audio switcher, digital parametric and/or graphic equalizer

**Master Volume:** -80dB to +20dB, 1dB steps

**Input Compensation:**  $\pm 10$ dB, 0.1dB steps from DMT, 0.2dB steps from SIMPL

**Bass Gain Range:**  $\pm 15$ dB @ 100Hz, 0.5dB steps

**Treble Gain Range:**  $\pm 15$ dB @ 10kHz, 0.5dB steps

**Equalization Modes:** 6-band parametric;

3-band graphic + 3-band parametric;

5-band graphic + 1-band parametric;

5-band graphic + 1-band parametric (speech-optimized)

**PEQ Filter Gain:**  $\pm 12$ dB, 0.01dB steps from DMT; +24/-36dB, 0.1dB steps from SIMPL

**PEQ Filter Bandwidth:** 0.02 to 2.0 octaves (1.0 to 3.0 for shelving) from DMT, 0.02 to 3.5 octaves from SIMPL, 0.01 octave steps

**PEQ Filter Center Frequency:** 25Hz to 19.9kHz from DMT; 5Hz to 24kHz from SIMPL, 1Hz steps

**PEQ Filter Types:** low pass, high pass, EQ filter (peaking/notching), bass shelf, and treble shelf

**GEQ Filter Gain:**  $\pm 12$ dB from DMT,  $\pm 10$ dB from SIMPL, 0.1dB steps

**GEQ Filter Center Frequencies:** 63Hz, 250Hz, 1kHz, 4kHz, 10kHz (5-band); 160Hz, 600Hz, 1kHz, 2.5kHz, 5kHz (5-band speech); 250Hz, 1kHz, 4kHz (3-band)

**Frequency Response:** 20Hz to 20kHz  $\pm 0.5$  dB

**THD+N:**  $< 0.005\%$  at 1kHz, A-weighted, maximum input/output

**S/N Ratio:**  $> 97$  dB, 20Hz to 20kHz A-weighted

**Channel Separation:**  $> 100$ dB at 1kHz;

90dB 20Hz to 20kHz

**Crosstalk:**  $> -90$ dB 20Hz to 20kHz

**Common Mode Rejection:**  $> 85$ dB 20Hz to 20kHz

## Connectors - Video

**VIDEO IN 1 - 4:** (4) BNC female comprising (4) composite or (2) S-Video inputs;

Input Impedance: 75 ohms;

Discrete video sensing on each input

**VIDEO OUT 1 - 2:** (2) BNC female comprising (2) composite or (1) S-Video outputs;

Output Impedance: 75 ohm

## Connectors - Audio

**AUDIO IN 1 - 2:** (2) 5-pin 3.5mm detachable terminal blocks comprising (2) balanced/unbalanced stereo line-level inputs;

Input Impedance: 15k ohms balanced, 10k ohms unbalanced;

Maximum Input Level: 4 Vrms balanced, 2 Vrms unbalanced

**AUDIO IN 3 - 7:** (5) 3-pin 3.5mm detachable terminal blocks comprising (5) unbalanced stereo line-level inputs;

Input Impedance: 10k ohms;

Maximum Input Level: 2 Vrms

**AUDIO OUT L/R:** (1) 5-pin 3.5mm detachable terminal block;

Balanced/unbalanced stereo line-level output;

Output Impedance: 200 ohms balanced, 100 ohms unbalanced;

Maximum Output Level: 3.6 Vrms balanced, 1.8 Vrms unbalanced

## Connectors - Control & Power

**COM A - B:** (2) DB9 male, bidirectional RS-232/422/485 ports;

Up to 115.2k baud;

Hardware and software handshaking support;

All ports support C2N-NPA8 Network Poll Accelerator

**IR SERIAL OUT A - D:** (4) 2-pin 3.5mm detachable terminal blocks;

IR/Serial output ports;

IR output up to 1.2 MHz;

1-way serial TTL/RS-232 (0-5 Volts) up to 115.2k baud;

Individual signal generator per port, allowing simultaneous firing of all ports

**I/O Versiports 1 - 4:** (1) 5-pin 3.5mm detachable terminal block comprising (4) digital input/output or analog input ports (referenced to GND);

Digital Input: Rated for 0-24 Volts DC, input impedance 20k ohms, logic threshold 1.24 Volts DC;

Digital Output: 250mA sink from maximum 24 Volts DC, catch diodes for use with "real world" loads;

Analog Input: Rated for 0-10 Volts DC, protected to 24 Volts DC maximum, input impedance 20k ohms;

Programmable 5 Volts, 2k ohms pull-up resistor per pin

**RELAY OUTPUT 1 - 4:** (1) 8-pin 3.5mm detachable terminal block comprising (4) normally open, isolated relays;

Rated 1 Amp, 30 Volts AC/DC;

MOV arc suppression across contacts

**IR IN:** (1) 3-pin 3.5mm detachable terminal block;

For connection of the CNXRMIRD IR Receiver (sold separately);

Allows IR wireless control from Crestron or third-party remotes using RC-5 IR commands

**COMPUTER:** (1) DB9 female, RS-232 computer console port

**NET:** (1) 4-pin 3.5mm detachable terminal block;

Cresnet port, Master/Slave selectable;

Expandable via C2N-NPA8 Network Poll Accelerator

**24VDC:** (1) 2.1mm barrel DC power jack, 24 Volt DC power input

(PW-2420RU power pack included)

Passes through to NET port to power Cresnet devices

**Ground:** (1) 6-32 screw, chassis ground lug

## Reset Buttons

**HW-R:** Hardware reset (reboots the control system)

**SW-R:** Software reset (restarts the SIMPL program)

## LED Indicators

**PWR:** (1 green) Indicates DC power supplied to unit

**NET:** (1 yellow) Indicates Cresnet bus activity

**MSG:** (1 red) Indicates control system has generated an error message

## Power Requirements

**Power Pack:** 2.0 Amps @ 24 Volts DC;

100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

**Available Cresnet Power:** 30 Watts using PW-2420RU power pack (included)

**Cresnet Power Usage:** 18 Watts (0.75 Amp @ 24 Volts DC) using Cresnet network power (no power pack connected to the 24VDC connector)

## Environmental

**Temperature:** 41° to 113°F (5° to 45°C)

**Humidity:** 10% to 90% RH (non-condensing)

## Enclosure

**Chassis:** Metal, black matte finish

**Faceplate:** Extruded aluminum, black matte finish with polycarbonate label overlay

**Mounting:** Freestanding or 1U 19-inch rack-mountable (adhesive feet and rack ears included)

## Dimensions

**Height:** 1.70 in (44 mm)

**Width:** 17.03 in (433 mm);

19.0 in 483 mm) with ears

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**Depth:** 9.08 in (231 mm)

## **Weight**

3.54 lbs (1.61 kg)

## **Included Accessories**

**PW-2420RU** Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/ International [Included Quantity: 1]

## **Available Accessories**

**C2N-HBLOCK:** Multi-type Cresnet Distribution Block

**C2N-MMS:** Video/RGB Switcher

**CNSP-XX:** Custom Serial Interface Cable

**CNXRMRD:** IR Receiver

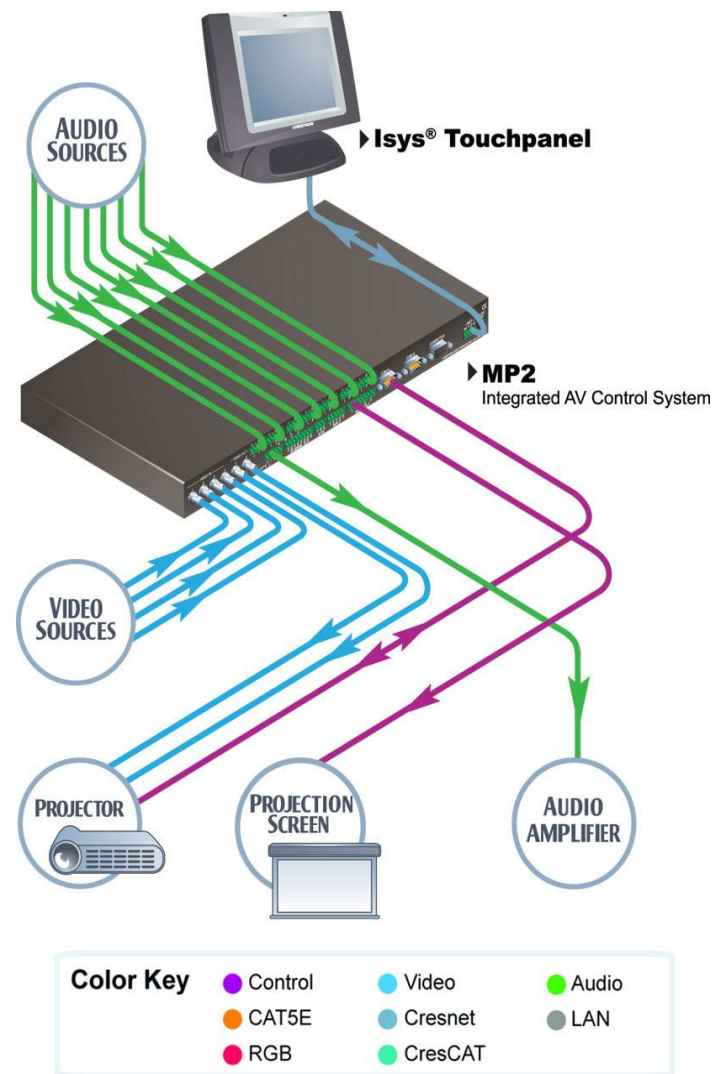
**IRP2:** IR Emitter Probe

## **Notes:**

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at [www.crestron.com/salesreps](http://www.crestron.com/salesreps) or by calling 800-237-2041.

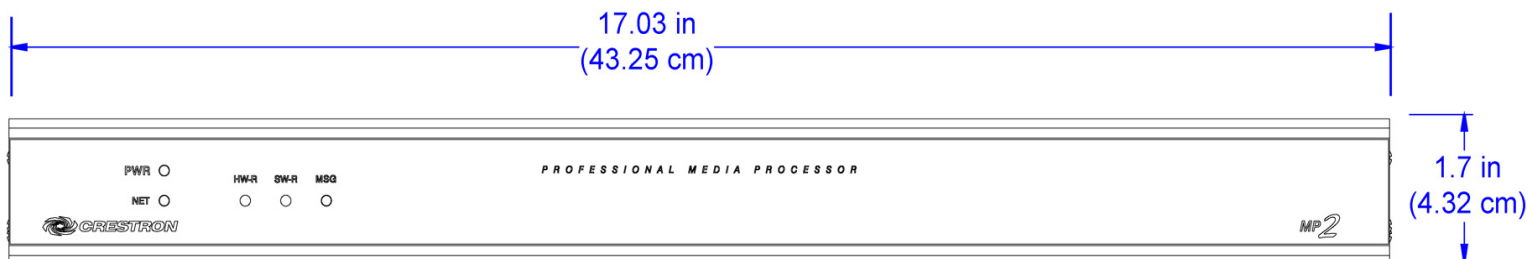
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## **Typical MP2 Application**

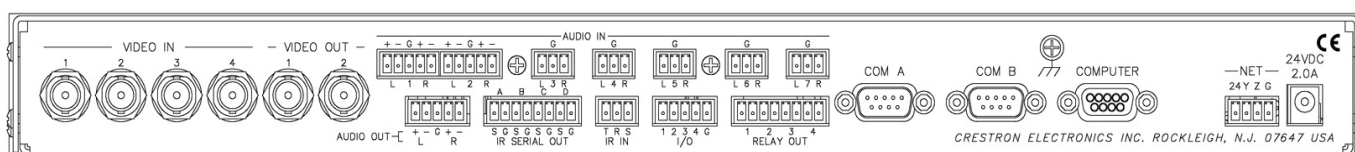


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